

DRIVE ELECTRIC NH



What are Electric Vehicles?

Electric vehicles save money on fuel and trips to the pump, increase energy security, are quiet and fun to drive, have lower maintenance cost, and emit fewer or no emissions. There are two types:

Electric vehicles (EVs), also known as battery electric vehicles (BEVs) are powered 100% by the battery energy storage system available on-board the vehicle. An EV is refueled by connecting it to the electrical grid through a connector system that is designed specifically for this purpose. The Nissan Leaf and Mitsubishi i-MiEV are examples of EVs.

Plug-in Hybrid Electric Vehicles (PHEVs) are powered by two energy sources. PHEVs use both a battery and a gasoline or diesel engine. Series plug-in hybrids use only the electric motor to drive the wheels, with the gas engine serving as a generator to charge the battery pack and extend the vehicle's range. With Parallel hybrid operation, the engine and the electric motor both attached to a single transmission and either can drive the wheels directly. Examples include the Ford C-Max Energi and the Toyota Prius Plug-In.

For a list of available electric vehicles, visit the virtual showroom at www.goelectricdrive.com.

[<http://www.goelectricdrive.com/index.php/electric-cars/virtual-showroom>]

Where Do I Charge?

For the majority of EV and PHEV drivers, charging will occur overnight at home. Learn the basics of home charging at [Alternative Fuels Data Center: Charging Plug-In Electric Vehicles at Home](http://www.afdc.energy.gov/fuels/electricity_charging_home.html)

[http://www.afdc.energy.gov/fuels/electricity_charging_home.html]. Public charging is available at locations throughout the state. For a list of charging stations in New Hampshire, visit [Alternative Fuels Data Center: Alternative Fueling Station Locator](http://www.afdc.energy.gov/locator/stations/) [<http://www.afdc.energy.gov/locator/stations/>]

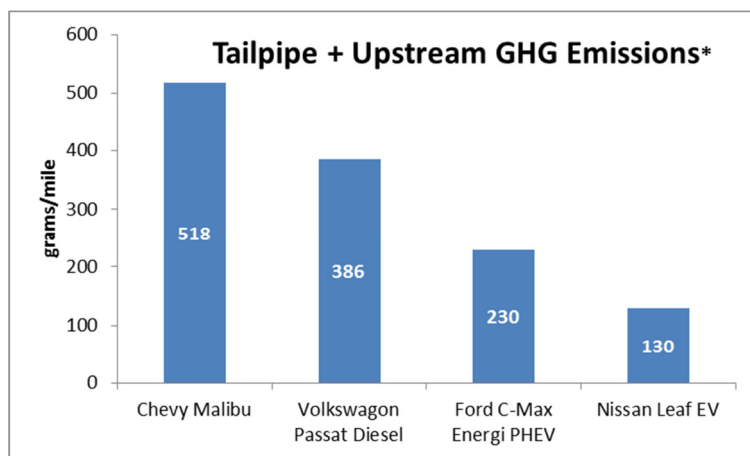
Is There a Return on Investment When Purchasing an Electric Car?

Despite the initial higher cost of many electric vehicles, for some drivers, it's an economic choice. First, a federal tax credit of up to \$7,500 is available for most electric vehicles¹. Second, without spark plugs, transmissions, radiators, oil and fuel filters, exhausts, and other gasoline-specific components, less maintenance is required, so these costs are reduced. Even with PHEVs, which have an internal combustion engine (ICE), maintenance costs will be much lower than a comparable gas-only vehicle. Since the ICE runs less often there is less wear & tear on the ICE, coolant, oil, etc. And, since the electric motor does most of the braking there is little wear and tear on brake pads and rotors. Depending on the electricity rates where you live, you'll spend the equivalent of about \$1 per gallon of gas to charge your electric vehicle. Find out how affordable an electric vehicle can be by using the online calculators at [Electric Car Calculator](http://www.befrugal.com/tools/electric-car-calculator/) [<http://www.befrugal.com/tools/electric-car-calculator/>] or [Alternative Fuels Data Center: Vehicle Cost Calculator](http://www.afdc.energy.gov/calc/) [<http://www.afdc.energy.gov/calc/>]. To compare the relative cost of fuel for an electric v. a gasoline car in your area, see [The eGallon: How Much Cheaper Is It to Drive on Electricity?](http://energy.gov/articles/egallon-how-much-cheaper-it-drive-electricity) [<http://energy.gov/articles/egallon-how-much-cheaper-it-drive-electricity>]

How Do EVs Benefit the Environment?

EVs and PHEVs running only on electricity have zero tailpipe emissions, but emissions may be produced by the source of electrical power, such as a power plant. In geographic areas that use relatively low-

polluting energy sources for electricity generation like New Hampshire, PHEVs and EVs typically have a well-to-wheelⁱⁱ emissions advantage over similar conventional vehicles running on gasoline or diesel. Estimated tailpipe and upstream greenhouse gas (GHG) emissions comparison of traditional and EVs vehicles are shown on the graph below.



*www.fueleconomy.gov

In addition, almost half of the air pollution in the state (ozone, volatile organic compounds, oxides of nitrogen and sulfur) is produced by transportation sources, most of it by on-road light duty vehicles.ⁱⁱⁱ

What Are the Other Benefits of Driving an EV?

Using electric and plug-in electric vehicles instead of conventional vehicles can help reduce U.S. reliance on imported petroleum and increase energy security. They also provide a

hedge against price spike and supply disruption. EV drivers also enjoy the fuel savings, which can be several hundred dollars per year, depending on specific vehicle, driving habits and current fuel cost. Electric vehicles accelerate much faster than a gas- or diesel-powered engine, and require less maintenance because they have fewer moving parts. And drivers will be gratified that they are doing their part to save the planet!

ⁱ U.S. Department of Energy, [Tax Incentives Information Center](http://www.fueleconomy.gov/feg/taxcenter.shtml) [http://www.fueleconomy.gov/feg/taxcenter.shtml]

ⁱⁱ Includes emissions associated with fuel recovery, refining, and electricity production.

ⁱⁱⁱ EPA 2011 National Emissions Inventory Data, www.epa.gov/ttn/chief/net/2011inventory.html [http://www.epa.gov/ttn/chief/net/2011inventory.html]